CLAIMS

Claims 1-30 (previously canceled)

31. (amended)A method of detecting blood flow or angiographic abnormality or variation in a vessel or tissue comprising:

administering a contrast enhancing amount of a paramagnetic metal containing magnetic resonance (MR) contrast agent into a vessel;

imaging a least a portion of the body through which the MR contrast agent passes, with a MR imaging technique, thereby collecting temporally spaced sets of 3-D and 2-D data, each data set collected serially throughout an acquisition or collection time; forming a time sequence of image data including early image data and later image data;

comparing 3-D and 2-D data from temporally spaced set of data by evaluating 2-D and [or] 3-D temporally acquired images by comparing ones of said early image data with ones of said later image data and their intensity to assess the blood flow or angiographic abnormality or variation.

32. (renumbered)The method of claim 1 wherein said comparing step is carried out by a physician visually examining at least two time sequenced images.

33. (renumbered)The method of claim 1 wherein said comparing step is carried out by software quantitatively manipulating 3-D or 2-D data from at least two temporally spaced sets of data.

34. (renumbered)The method of claim 1 wherein said collection time is greater than about 60 milliseconds.

35. (renumbered)The method of claim 1 wherein said collection time is less than about 15 seconds.

36. (renumbered)The method of claim 1 wherein said MR imaging technique is selected from the group:

T2* weighted, T2 weighted, T1 weighted imaging sequences.

37. (amended)A method of detecting blood flow abnormality or variation, in a human body, said method comprising the steps of:

administering into the vasculature of said body a timed injection of a contract enhancing amount of a paramagnetic metal containing magnetic resonance imaging contrast agent,

subjecting said body to a magnetic resonance imaging procedure capable of generating from magnetic resonance signals from said body a series of temporally spaced images of at least part of said body into which said agent passes, said procedure being a fast, high speed or single shot imaging procedure,

detecting temporal variations in said signals or images; and from said temporal variations identifying regions of abnormal or modified blood flow in said body and providing a quantitative indication of the degree of blood flow abnormality.

38. (amended)A method of detecting and quantitatively evaluating the severity of blood flow abnormality in a human body, said method comprising the steps of:

administering into the vasculature of said body a contrast enhancing amount of a paramagnetic metal containing magnetic resonance imaging contrast agent;

subjecting said body to a magnetic resonance imaging procedure capable of generating from magnetic resonance signals from said body a series of temporally spaced images of at least a part of said body into which said contrast agent passes, said procedure being a fast, high speed or single shot imaging procedure, to detect temporal variations in said magnetic resonance signals or images;

detecting blood flow abnormality or flow variation in obstructed blood vessels in said body; and

identifying from said temporal variations in said images the blood flow abnormality.